Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Expanding Flexible Use of the 3.7 to 4.2 GHz Band	)	GN Docket No. 18-122
	)	
Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz	)	GN Docket No. 17-183 (Inquiry Terminated as to 3.7-4.2 GHz)
	)	
Petition for Rulemaking to Amend and Modernize Parts 25 and 101 of the Commission's Rules to Authorize and Facilitate the Deployment of Licensed Point-to-Multipoint Fixed Wireless Broadband Service in the 3.7-4.2 GHz Band	)	RM-11791
	)	
Fixed Wireless Communications Coalition, Inc., Request for Modified Coordination Procedures in Band Shared Between the Fixed Service and the Fixed Satellite Service	)	RM-11778

COMMENTS OF DIGITAL NETWORKS, LLC

Digital Networks, LLC, on behalf of its subsidiaries Digital Networks-Southeast, LLC, Digital Networks-Southwest, LLC, Digital Networks-Midwest, LLC, Digital Networks-Northeast, LLC, and Digital Networks-Northwest, LLC (collectively, "Digital"), each subsidiary holding numerous FCC broadcast licenses and construction permits, submits these comments in response to the above-captioned Notice of Proposed Rulemaking ("NPRM") in which the Federal Communications Commission solicits feedback on proposals to permit terrestrial mobile use of the 3700-4200 MHz band (the "C-band").[1] Digital has three primary goals in submitting these comments: (1) make perfectly clear that the C-band content distribution services provided by satellite operators are essential to our business; (2) support the market-based approach of Intelsat License LLC, SES Americom, Inc., and Intel Corporation proposed in the NPRM to

[1] *Expanding Flexible Use of the 3.7-4.2 GHz Band*, Order and Notice of Proposed Rulemaking, GN Docket No. 18-122, FCC 18-91 (rel. July 13, 2018).

allow terrestrial mobile use of the C-band;[2] and (3) oppose new fixed point-to-multipoint ("P2MP") services in the C-band and associated proposed limits on full-band, full-arc protection for satellite earth stations.

Digital operates seventy-five (75) low power broadcast stations in thirty-seven (37) states. Most of Digital's stations are translators of other stations and all exclusively receive programming via C-band satellite. In addition to entertaining and informative programming, Digital provides essential services to the public by broadcasting emergency alerts and warnings from the Emergency Alert System ("EAS"), educational and informational programming for children and youth, and public service announcements. Many of Digital's stations are located in rural areas where alternative reception of programming via fiber or broadband is not possible.

Thus, the C-band forms the backbone of the infrastructure content companies use to supply consumers across the country with premium television programming. Any change in the current C-band operating environment could negatively affect our business[3] and the American consumers we serve. Any negative impact on the available C-band satellite spectrum, specifically interference from terrestrial services, could affect Digital's ability to continue reliably providing programming to our viewers.

C-band offers reliability, quality, and cost efficiency that cannot be matched by other technologies or in other satellite spectrum. Digital's stations are mainly located at unmanned tower sites, many of which have limited or no access to fiber or broadband internet. Unlike our full-power counterparts, many of whom have local studio facilities and STL links between their studios and tower, all of Digital's programming is received at the tower site on a C-band receive earth station. The availability of programming on the satellite Ku-band is limited due to the

[2] *See* NPRM ¶¶ 66-97.

[3] Indeed, our industry has made substantial investments in C-band facilities to expand and update our distribution networks to ensure that all Americans have access to high quality content.

capacity and cost of Ku-band space segments for full-time content providers. Further, Ku-band reception is not desirable for full-time use as the higher frequencies of the Ku-band can be impacted by weather, specifically rain fade and snowfall. Switching away from C-band satellites would also strand the investment Digital has made in the ground stations used for programming reception.

Moreover, the record suggests that co-frequency sharing between terrestrial mobile services and satellite operations is not feasible. As the NPRM recognizes, because signals from satellites are very weak when they reach the ground, terrestrial mobile operations could cause harmful interference to earth stations over large distances.[4] Digital has been affected at certain sites by terrestrial based microwave and WISP-type equipment installations located in close proximity to our receive earth stations which overdrive and interfere with our LNBs reception. These instances have come at great expense and time spent attempting to resolve the interference and interruption of our programming. Any risk of interference to the C-band satellite services on which Digital relies is unacceptable, not only from a business revenue perspective, but because it jeopardizes the ability of American consumers to receive the programming content they want and upon which they rely, especially EAS alerts.

The proper management of the future of the C-band is critical to the continued vitality of our business. Thus, Digital believes that a market-based approach, led by satellite operators, is the only practical solution for introducing terrestrial mobile operations in the C-band. Cable systems, broadcasters and content delivery companies have been working with satellite operators for decades. Digital is its customers, and they understand Digital's needs and have direct knowledge of our operations. Consequently, satellite operators are best positioned to protect our company and other incumbent users while also undertaking the arduous and costly task of

[4] *See* NPRM ¶ 50.

clearing spectrum for terrestrial mobile use. Digital urges the Commission to move forward with the market-based solution discussed in the NPRM.[5]

The Commission should also consider the future needs of thousands of over-the-air television broadcasters who rely largely on C-band spectrum to receive programming. As ATSC 3.0 begins to be deployed, additional streams of programming will be needed by broadcasters to fill available channel space potentially created by the higher compression schemes provided by this next-generation broadcast standard. A substantial reduction in the available C-band spectrum could limit the diversity of programming options available to broadcasters as well as drive up the cost of the remaining spectrum for program distributors who rely on C-band delivery.

Further, the Commission should not allow new P2MP services in the C-band or restrict the protection of C-band earth stations across the full spectrum band and the visible satellite arc.[6] The flexibility to change frequencies and receive antenna orientations is essential to the value of the C-band satellite capacity on which Digital and others rely. This flexibility allows restoration of service if an outage affects our primary space segment and facilitates the resolution of interference issues, as well as enabling us to take advantage of competition among satellite operators. The requirement to work around new P2MP facilities would undermine the nationwide reach of C-band service, and the requirement to modify earth station licenses for any change in operating parameters would impose significant and unjustified regulatory burdens.

Finally, the results of the Broadcast Incentive Auction channel repacking,[7] especially on low power television stations, may require relocation of certain broadcast transmission facilities.

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[5] *See* NPRM ¶¶ 66-97.
[6] *See* NPRM ¶¶ 37-40 & 116-132.
[7] *In the Matter of Expanding the Economic and Innovation Opportunities Through Incentive Auctions*, 29 FCC Rcd 6567 (2014).

Also, broadcasters in leased facilities or for other reasons may find it necessary to relocate in the future. In such cases, new broadcast locations would not necessarily have C-band protection to enable a broadcaster to continue receiving the programming it had at its prior location. Therefore, Digital urges the Commission to focus on other spectrum that is not as intensely used as the C-band to meet any requirements for additional frequencies suitable for P2MP operations.

Respectfully submitted,

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